



RESEARCH ARTICLE

VALSALVA MACULOPATHY FOLLOWING STRENUOUS ACTIVITY: A CASE REPORT

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Abstract

Valsalva maculopathy is one of many causes of premacular hemorrhage. This case report highlights the interest of multimodal imaging in the diagnosis of retinal emergencies which can engage the visual prognosis, especially in a young patient as in our case of Valsalva Maculopathy. A 32 years old male arrived at the ophthalmology emergency for a sudden painless loss of central vision in his left eye after doing some heavy dumbbell exercises without any context of traumatism. After the eye examination, he was been diagnosed with Valsalva maculopathy. The bleeding spontaneously resorbed. Follow-up after 12 weeks was uneventful.

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Introduction:-

Valsalva maculopathy is typically unilateral pre-retinal bleeding in the macular region. It is secondary to a sudden spike in intrathoracic and/or intraabdominal pressure with a closed glottis, resulting in a spike of intraocular venous pressure and a subsequent rupture of small capillaries [1]. It is relatively rare and often benign. Valsalva maculopathy is one of many causes of premacular hemorrhage. Other causes include arteriolar macroaneurysms, proliferative diabetic retinopathy, Terson syndrome, retinal venous occlusions, eye trauma, and hematological disorders [2,3].

Case presentation:

A 32 years old male, with no medical history, consulted for a sudden painless loss of central vision in his left eye (OS). He reported doing some heavy dumbbell exercises the day before. No history of recent trauma has been reported. Examination found a visual acuity of hand movements in the OS, and 20/20 in the right eye (OD). Eye motility was conserved, pupils were symmetric with normal direct and consensual reflexes. Intraocular pressure (IOP) was normal in both eyes. Biomicroscopic examination of the anterior segment was normal in both eyes, there were no signs of hemorrhage in the periorbital skin or conjunctiva. Fundoscopy of the OS revealed macular pre-retinal bleeding extending from a near superotemporal artery to the fovea (Figure 1). The rest of the retina was seemingly normal. Examination of the OD fundus was unremarkable. An OCT was realized, revealing a prefoveal sub-inner limiting membrane (ILM) hemorrhage (Figure 2). Treatment was conservative, the bleeding spontaneously resorbed after roughly 12 weeks. Follow-up was unremarkable. After 6 months, his corrected visual acuity was improved to 20/25.

Discussion:-

Valsalva maculopathy is one of many causes of premacular hemorrhage. Other causes include arteriolar macroaneurysms, proliferative diabetic retinopathy, Terson syndrome, retinal venous occlusions, eye trauma, and hematological disorders. A thorough investigation is thus a necessity when presented with such a hemorrhage.

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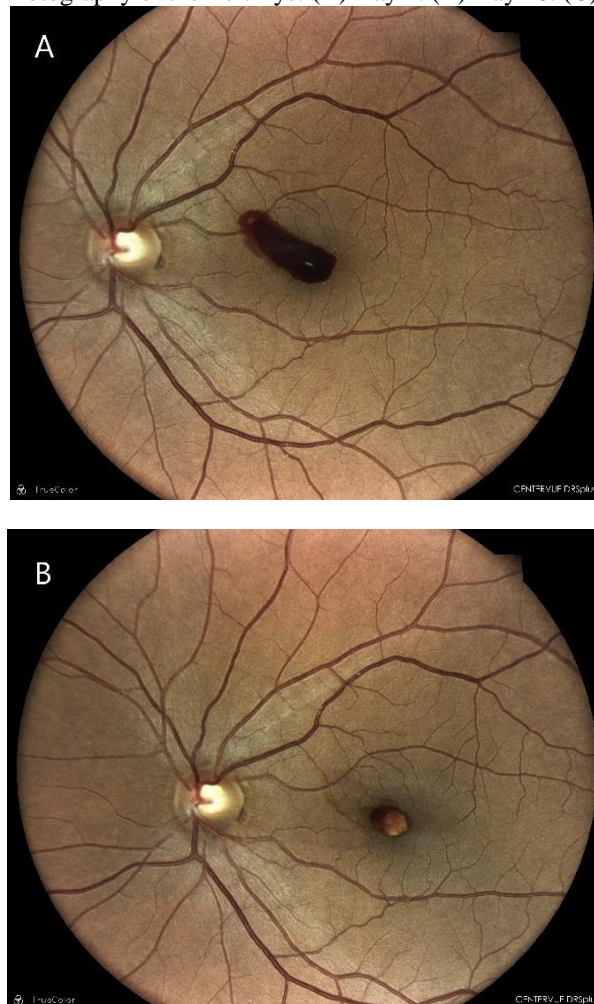
Valsalva maculopathy is usually a benign affliction, spontaneously resolving after a few weeks with no major sequelae. A treatment with Nd:YAG laser may be proposed to accelerate recovery. Whilst VM is a common cause of macular bleedings, other causes should be assessed, such as retinal vein occlusions and blood dyscrasia, especially if no history of thoracic or abdominal hyper pressure has been reported. Management of VM is usually conservative, observation and comforting the patient being the standard procedure. Education of the patient consists in avoiding any strenuous activity, stopping, if possible, any blood-thinning medication, and circumventing any situation resulting in high abdominal or thoracic pressure: such as treating constipation or a stubborn cough. However, for large premacular hemorrhage evolving for less than 3 weeks, neodymium-doped yttrium aluminum garnet (Nd:YAG) laser membranotomy can be used to cut open the ILM or posterior hyaloid. This allows blood to escape inferiorly, clearing the visual axis, and avoiding the abovementioned adverse effects [7,8]. Complications of YAG laser membranotomy include macular holes, epiretinal membrane formation, and retinal detachment [2]. Pars Plana vitrectomy with or without ILM peeling may also be considered, especially for dense premacular hemorrhage with insufficient spontaneous resorption after a few weeks [4]. Intravitreal tissue plasminogen activator with gas has also been described in cases with deeper retinal hemorrhages [9].

Conclusion:-

Valsalva maculopathy is usually a benign affliction, spontaneously resolving after a few weeks with no major sequelae. A treatment with Nd:YAG laser may be proposed to accelerate recovery. Whilst VM is a common cause of macular bleedings, other causes should be assessed, such as retinal vein occlusions and blood dyscrasia, especially if no history of thoracic or abdominal hyper pressure has been reported.

List of figures:

Figure 1:- Fundus Photography of the Left Eye. (A) Day 1. (B) Day 20. (C) Day 3. (D) Day 80.



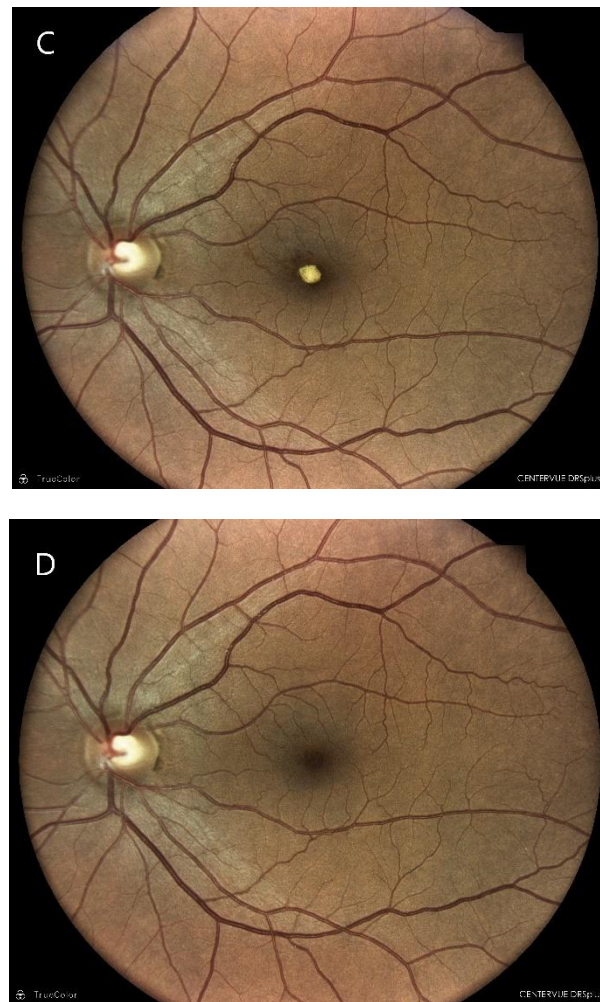
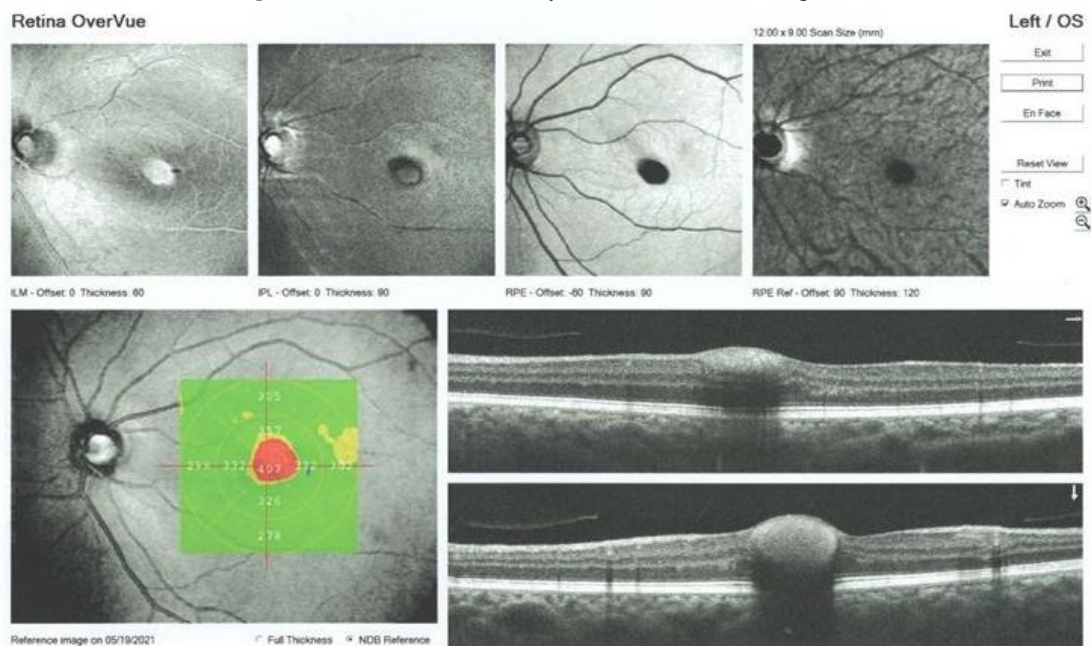


Figure 2:- OCT of the Left Eye: Sub-ILM Hemorrhage.



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